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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Please amend claim 220 as follows:

220. The optoelectric device of claim 218, wherein the quantum dot is used in lieu of ~~the~~ bulk semiconductor material in the optoelectric device.

223. The optoelectric device of claim 221, wherein the quantum dot is used in lieu of ~~the~~ bulk semiconductor material in the optoelectric device.

Please cancel withdrawn claims 216-217.

Please renumber claims 198-199, 203-215, 218-224 as claims 1-20.

2. The following is an examiner's statement of reasons for allowance: while the prior art discloses quantum dot comprising a concentration gradient of a first semiconductor and a second semiconductor (see Lee et al. [US 6,710,366]), the prior art fails to teach that the band gap energy is non-linearly related to the molar ratio of the at least two semiconductors. Since not all quantum dots comprising a concentration gradient of a first semiconductor and a second semiconductor have a band gap energy that is non-linearly related to the molar ratio of the at least two semiconductors. While the prior art also discloses varying composition, and adding a

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plurality of shells around the core of the nanocrystal (see Weiss et al. [US 6,207,392]), there is no indication that changing these factors alone would necessarily result in quantum dots with a band gap energy that is non-linearly related to the molar ratio of the at least two semiconductors, and furthermore is directed toward achieving a different purpose, specifically selection of quantum dots with a particular emission wavelength, which may or may not be compatible with the goal of obtaining a quantum dot that is non-linearly related to the molar ratio of the at least two semiconductors. Furthermore, there is no guidance or motivation provided the prior art toward achieving this particular purpose.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571)272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571)272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nelson Yang/

Primary Examiner, Art Unit 1641